prevailed over other portions of the district. The rainfall in Florida, where the rainy season usually begins in June, was unusually large. Over the main portion of the peninsula the rainfall ranged from 10 to over 20 inches at nearly all stations, and exceeded 25 inches at a few places immediately south and southeast of Tampa, viz: Pinellas Park, 26.83; Hypoluxo, 25.19; and Bradentown, 25.62 inches. Other regions of excessive rainfall with more than 10 inches for the month are found in southern Georgia, in the vicinity of Atlanta, where the total for the month, 11.21 inches (departure +7.22), is the largest amount received in June in 47 years, in eastern North Carolina and the central-west portion of the Mississippi area.

The rainfall was only moderately above normal in Mississippi, Alabama, and the Carolinas, and there was a considerable deficiency in Virginia, where the total for the month was under 2 inches at some stations. The State averages ranged from 3.47 inches (departure -0.86) for the Virginia area to 11.61 inches (departure +5.06) for Florida. The mean for the district was 6.34 inches, or 1.40 above normal.

Of distinct periods of rainfall it is hardly possible to speak, as scattered showers occurred throughout the month in several States, but as a rule the rains were most general from the 2d to 7th, 13th to 16th, and 24th to 30th. Excessive downpours occurred, especially on the 2d, 6th to 8th, 10th, 14th, and 24th to 25th. The maximum 24-hourly amount was 8.42 inches at Hypoluxo, Fla., on the 10th, followed by 5.95 inches at Charleston, S. C., on the 6th–7th.

Thunderstorms were very frequent during the month, being generally, however, of a mild character. Several hailstorms, a few severe, were reported, most of them in Alabama and Mississippi.

### MISCELLANEOUS PHENOMENA.

The prevailing winds during the month were from the southwest in all States in the district, except Florida and Mississippi, where they were from the southeast and south. The wind movement was not large, the average hourly velocity exceeding 10 miles at Hatteras, Charleston, Pensacola, and Sand Key only. The highest wind velocity was 54 miles an hour from the north, on the 10th, at Sand Key, Fla. Gales of 40 miles an hour or over occurred also on one day each at Hatteras, Wilmington, Charleston, Savannah, and Atlanta and on two days at Pensacola. The average number of clear days for the district was 11, partly cloudy days 10, cloudy days 9, and days with appreciable precipitation 11.

#### DAMAGE BY LOCAL STORMS.

A severe local rain and wind storm occurred at Atlanta on June 13th, causing considerable damage to property in the city. The rainfall for nine hours was 2.84 inches, and the wind rose to a velocity of 48 miles an hour at 9.15 p.m. Streets were badly washed by the downpour, some embankments carried away, stores in lower districts flooded, while the sudden increase in the wind blew in a number of plate-glass windows.

During a storm that occurred at Myrtle, Montgomery County, Alabama, a town about 14 miles southeast of Montgomery, hail fell for about 40 minutes, and some of the hailstones were three-fourths of an inch in diameter. Crops were considerably damaged and some buildings were unroofed by the accompanying wind. A similar storm occurred on the same day at Eufaula, Ala., and a man was killed by lightning near Clayton. Mr. John L. Bryan, marshal of Brantley, Ala., was killed by lightning on the 28th.

#### RIVER CONDITIONS.

As compared with preceding months relatively low stages prevailed during June in the rivers of Virginia, North Carolina, Alabama, and Mississippi, and flood stages were not attained at any point in those States. In South Carolina all the rivers averaged above the normal June stages, the highest occurring as a rule about the middle of the month. Flood stages were approached in the Lynch and Black Rivers and slightly exceeded in the Saluda at Chappells, in the Wateree at Camden, and in the Santee at Ferguson and Rimini. Based on the heavy rains of the 14th–15th, warnings were issued for flood stage at Cheraw on the upper Pedee. A crest stage of 27.5 feet, or 0.5 foot above the flood stage, was attained on the night of the 15th, being a rise of 24 feet within a little more than 36 hours. The water did not go sufficiently high to cause any material damage.

The rivers of Georgia were above the normal during the first half of the month, but flood stages were attained only in the Broad River at Carlton on one day, in the Ocmulgee River at Abbeville from the 10th to the 16th, and in the Oconee at Macon. Warnings were issued in ample time and very little damage resulted.

# SPECIAL NOTES ON THE WEATHER IN FLORIDA DURING JUNE, 1912.

By A. J. MITCHELL, Section Director.

The continued and rather unusually heavy rains during the first decade of June resulted in much damage to melons and vegetables and greatly retarded general development throughout the peninsula. Lumbering in some instances was suspended, the water being too high for the logger to carry on his work. On the whole, the citrus crop was benefited by the rains, though a much less amount would have answered the needs of the situation. The fruit will be of splendid size and of excellent flavor. As a result of crop deterioration, however, the damage will aggregate hundreds of thousands of dollars.

## ADDENDUM.

A tornado crossed the northwestern portion of Jefferson County, Ala., about 4 o'clock Monday morning, April 22, 1912, passing from Porter northeast to Newcastle, over a path about 200 to 400 yards wide and 20 miles long and doing more or less damage at Porter, Gin Town, Pinkney City, Brookside, and Mineral Springs. Many buildings were destroyed and a number of people were injured, but only 1 person was killed.